



EDUC 9973: RESEARCH PARADIGMS IN EDUCATION STUDIES DAY THREE

Research Method

Research Design


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Research method

The research questions drive the selection and justification of your research method. Broadly, choose between:

Qualitative (making sense of, interpreting, carrying out.....)

- What are the perspectives of.....?
- How do people conceptualize/construct/interpret/make sense of?
- How do people manage/deal with/operationalize...?



Quantitative (measuring, cause and effect relationships, testing theories....)

- What is the effect of X on Y?
- Do constructivist practices improve mathematics learning in Year 9 students?
- How do time management interventions affect/impact on behaviour management in ADHD students?

Review the research methodology literature that justifies the selection of your research method to fulfill the broad Aims of your project (refer to your rationale) and to answer your research questions.

The role of theory

Description – Explanation Distinction

- *Description* sets out to collect, organize, or summarize information about a phenomenon: asks the “What?” questions.
- *Explanation* sets out to explain or account for the descriptive information:
 - Why is this the situation?
 - How did it come about?
 - What does it mean for the participants?

The role of theory (cont)

Theory Verification – Theory Generation Distinction

Both may be either quantitative or qualitative.

- *Theory verification* sets out to test a theory, or a proposition (hypothesis) arising from that theory; it *describes* outcomes.
- *Theory generation* aims to develop a theory to explain empirical phenomena or findings:

Questions → Data → Theory

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The role of theory (cont)

Pre-structured or unfolding (Punch 2000, p.41)

- *Pre-structured* (quantitative) is characterized by pre-specified research questions, tightly structured design, pre-structured data (factors, variables, correlations...)
- *Unfolding* (qualitative) is characterized by general, open-ended questions and guiding questions; loose design (can be modified); no preconceived categories for data analysis.



Research Design

“Design” sits between the research questions and the data, showing how the research questions will be connected to the data, and what tools and procedures will be used to answer them.

Data collection shows how data will be collected:

- Following what strategy?
- Within what framework?
- From whom?
- How?



a) What Strategy?

***Generic Strategy* identifies the strategy in general terms:**

- Quantitative strategies: experiment, correlational survey, interventionist...
- Qualitative strategies: ethnography, case study, grounded theory, discourse analysis, life history....

***Procedural Strategy* explains how the researcher will execute the general strategy:**

- How will data be collected?
- Why will they be collected in that way?



b) What framework?

‘Framework’ in this context refers to the conceptual status of things is being studied and their relationship to each other.

- *Pre-specified* research questions (quantitative) often have a clear conceptual framework, and developing and describing that framework can help to clarify the research questions.
- *Unfolding studies* may begin with a looser conceptual framework (see Conceptual literature review) from which a more detailed or theoretical framework may emerge.

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c) From Whom?

Who or what will be studied; from whom will the data be collected?

Participants

- Who are the participants?
- What kinds of information will each group of participants contribute?
- How will they be recruited?
- How many?
- How will the sample be limited, if not statistically? (theoretical sampling)

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Sampling

Quantitative studies should indicate:

- The sampling strategy (e.g. purposive, representational or both) and what claims for generalizability will be made
- Size of sample (check the statistical requirements)
- How it will be selected

Qualitative studies should indicate:

- The sampling strategy, including any intention for generalizability
- The extent of the proposed sample
- How sample units will be chosen



How will data be collected?

This question requires detail of the instruments and procedures to be used to collect the data.

Quantitative studies typically use instruments such as questionnaires, standardized measuring instruments, rating scales or observation schedules.

- explain why the particular instrument is suitable for your purposes, and what its psychometrics are.
- if developing instruments, explain why outline of the steps involved and validation procedures.

Qualitative studies use a variety of instruments (surveys, informal observation schedules, field notes, reflective logs, interviews).

- All 'instruments' should be identified and described, together with the processes used to validate them.
- The researcher is also regarded as a data collection instrument, and appropriate strategies to control for interviewer bias, particularly in cases where the researcher is an implicated participant, should be discussed.



Data Analysis

- *Quantitative*: specify the kinds of statistical procedures to be applied to the data
- *Qualitative*: specify the kinds of *approach* to be applied. e.g. grounded theory including types of coding; constant comparisons; identification of themes and issues; cross case analyses.....
- *Economic presentation*: Design Matrices demonstrate the ways in which your research questions connect to your data collection procedures and your data analysis procedures.



Individual Tasks

- Use Punch (2000, p.62-63) as a checklist against your 9972 assignment.
- Fill in any gaps that are apparent, make any other amendments.
- Develop a design matrix for your study
- Present this to the class in the first session of day 4 (prepare an OHT or use data projector)